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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/879,248	06/12/2001	Hao Fan	21829/81 (EBC-006)	4829

7590 12/31/2002  
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EXAMINER

MAYES, LAURIE A

ART UNIT	PAPER NUMBER
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1653

DATE MAILED: 12/31/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/879,248

Applicant(s)

FAN ET AL.

Examiner

Laurie Mayes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-92 is/are pending in the application.
- 4a) Of the above claim(s) 3-46 and 49-92 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,47 and 48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 & 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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### DETAILED ACTION

Applicant's election with traverse of claims 1, 2, 47 and 48 in Paper No. 8 is acknowledged. The traversal is on the ground(s) that the "various groups of invention identified in the restriction requirement are related to one another and would necessarily require common areas of search and consideration". This is not found persuasive because the inventions in groups I-IV, namely, a protein, a nucleic acid, a method of external application of the plant with an isolated HR elicitor protein and a method of transforming a plant with an isolated nucleic acid encoding a HR elicitor protein are all different inventions and are classified differently which would place an undue burden on the examiner. The protein and nucleic acid in groups I and II are different molecules, have different uses and are classified in different classes. The method of group III is drawn to a method applying a protein while the method of group IV is drawn to a method of transforming a plant with an isolated nucleic acid. These methods are different and are classified differently.

The requirement is still deemed proper and is therefore made FINAL.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2, 47 and 48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claims 1 and 47, it is unclear what the "spaced apart domains" or the "acidic portion" are. Is the acidic portion the side chain or is the entire

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fragment acidic? The language “and capable of eliciting” is unclear; it is suggested that the applicant instead use the language: “which elicits . . .”. It is also unclear which part elicits a hypersensitive response; is it the acidic portion or is it the alpha-helix?

Regarding claims 2 and 48, it is unclear how the recombinant protein is different from a protein which is not recombinant. For example, “gly gly gly” could be non-recombinant and “gly gly gly” could be recombinant. It is unclear how these proteins differ. Claim 2 and 48, as dependent on claims 1 and 47 respectively, are also indefinite for the above-mentioned reasons.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 47 and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Cornell Research Foundation (WO 98/54214). As the applicant states in the application, *Erwinia amylovora*'s hypersensitive response elicitor has a first domain spanning from amino acids numbers 32-74, an acidic region from a.a. 32-57, an alpha-helix from a.a. 57-74, a second domain from a.a. 130-180, an acidic region from a.a. 130-157 and an alpha helix from a.a. 157-180 (p. 11, lines 30-33 and p. 12, lines 1-10). Cornell teaches an isolated hypersensitive response elicitor protein from *Erwinia amylovora* (p.19, lines 25-28) wherein the protein elicits a hypersensitive response in plants (p.6, lines 30-33), is recombinant (Ex. 2 and claims 15 and 20) and wherein the protein is comprised of the amino acids 1 through 218 of the amino acid

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sequence for the hypersensitive response elicitor protein derived from *Erwinia amylovora*.

(claim 13; see also Ex. 2). Thus the isolated, recombinant protein taught by Cornell is comprised of an isolated pair of spaced apart domains, each comprising an acidic portion linked to an alpha-helix and capable of eliciting a hypersensitive response in plants. Therefore, claims 1, 2, 47 and 48 are anticipated by Cornell.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laurie Mayes whose telephone number is (703) 605-1208. The examiner can normally be on Monday through Friday from 7 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached on (703) 305-2923. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3014 for regular communications and (703) 305-3014 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1123.

*L. Mayes*

Laurie Mayes  
Patent Examiner  
Art Unit 1653  
December 27, 2002

*Christopher S. F. Low*  
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